

Serial No. 10/728,721
Wakefield, et al.
Filed December 5, 2003

Response to Office Action
Examiner: Apu M. Mofiz
Group Art Unit: 2165

using linguistic characteristics of the free text to extract relational facts from it,
producing a set of construed data reflecting at least one relational fact conveyed in the free
text, each construed datum being relatable to the structured data of the same data record;
producing a set of construed data reflecting at least one relational fact conveyed in the
free text, each construed datum being relatable to the structured data of the same data record;
~~containing at least one relational fact, each construed datum being further relatable to a data-~~
~~tuple of the structured data;~~
integrating the ~~produced~~ construed data with the particular structured data ~~data tuples of the~~
~~structured data;~~ and
rendering at least one visual representation of the integrated data.

Claim 2 (currently amended) 2. A computer program product according to claim 1, wherein said
extracting step uses caseframes. ~~accessing a source of unstructured data accesses-~~
~~unstructured data contained within the database of structured data.~~

Claim 3 (cancelled)

Claim 4 (cancelled)

Claim 5 (original) 5. A computer program product according to claim 1, wherein said
instructions are further executable to perform the function of producing a new database
containing the integrated data produced by said integrating.

Claim 6 (original) 6. A computer program product according to claim 1, wherein said
instructions are further executable to perform the function of inserting the produced data into
the database of structured data while performing said integrating the produced data.

Claim 7 (original) 7. A computer program product according to claim 1, wherein said
instructions are further executable to perform the function of creating a new database while

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performing said integrating the produced data.

Claim 8 (original) 8. A computer program product according to claim 7, wherein the instructions are further executable to produce a new relational database containing the integrated data produced by said integrating.

Claim 9 (original) 9. A computer program product according to claim 7, wherein the instructions are further executable to produce a file containing the integrated data produced by said integrating.

Claim 10 (original) 10. A computer program product according to claim 9, wherein the instructions are further executable to produce a file having a format selected from the group of XML, character separated values, spreadsheet formats and file-based database structures.

Claim 11 (original) 11. A computer system including a computer program product according to claim 1, further comprising: a processing unit coupled to said one or more storage media devices, said processing unit being capable of executing said instructions; and an execution command unit, whereby operation of said instructions and said processing unit may be commanded or controlled.

Claim 12 (currently amended) 12. A computer program product according to claim 1, wherein said instructions are further executable to combine similar ~~like~~ attributes for the extracted relational facts produced in performing said extracting relational facts from the free text.

Claim 13 (currently amended) 13. A computer program product according to claim 1, wherein said instructions are further executable to combine ~~like~~ similar relation types for the extracted relational facts produced in performing said extracting relational facts from the free text.

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Claim 14 (original) 14. A computer program product according to claim 1, wherein said instructions provide relational facts with domain roles applied in performing said extracting relational facts from the free text.

Claim 15 (original) 15. A computer program product according to claim 1, wherein said instructions store the relational facts produced in performing said extracting relational facts from the free text.

Claim 16 (original) 16. A computer program product according to claim 1, wherein the extracted relational facts produced in performing said extracting relational facts and the integrated data produced by the performance of said integrating the produced data includes reference information to the original free text.

Claim 17 (currently amended) 17. A computer program product located to one or more storage media devices usable to perform integration of mixed format data, said computer program product comprising instructions executable by a computer to perform the functions of:

accessing a database of structured data, the structured data comprising a set of data tuples;

accessing a database of data records, at least some of the data records containing both structured data and unstructured data, the ~~structured data comprising a set of data tuples~~; the unstructured data of a particular data record including free text related to the structured data of that data record;

~~accessing a source of unstructured data, the unstructured data including free text relatable to the data tuples of the structured data;~~

using linguistic characteristics of the free text to extract relational facts from it,

~~extracting relationships from the free text;~~

producing a set of construed data reflecting at least one relational fact conveyed in the free

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text, each construed datum being ~~relatable to a data tuple of the structured data of the same data record~~ ;

integrating the ~~produced~~ construed data with the particular structured data ~~data tuples of the structured data~~; and
providing the integrated data to a data visualization application.

Claim 18 (cancelled)

Claim 19 (cancelled)

Claim 20 (original) 20. A computer program product according to claim 17, wherein said instructions are further executable to perform the function of applying caseframes while performing said interpreting the free text.

Claim 21 (original) 21. A computer program product according to claim 17, wherein said instructions are further executable to perform the function of producing a new database containing the integrated data produced by said integrating.

Claim 22 (original) 22. A computer program product according to claim 17, wherein said instructions are further executable to perform the function of inserting the produced data into the database of structured data while performing said integrating the produced data.

Claim 23 (original) 23. A computer program product according to claim 17, wherein said instructions are further executable to perform the function of creating a new database while performing said integrating the produced data.

Claim 24 (original) 24. A computer program product according to claim 23, wherein the instructions are further executable to produce a new relational database containing the

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integrated data produced by said integrating.

Claim 25 (original) 25. A computer program product according to claim 24, wherein the instructions are further executable to produce a file containing the integrated data produced by said integrating.

Claim 26 (original) 26. A computer program product according to claim 25, wherein the instructions are further executable to produce a file having a format selected from the group of XML, character separated values, spreadsheet formats and file-based database structures.

Claim 27 (original) 27. A computer system including a computer program product according to claim 17, further comprising: a processing unit coupled to said one or more storage media devices, said processing unit being capable of executing said instructions; and an execution command unit, whereby operation of said instructions and said processing unit may be commanded or controlled.

Claim 28 (original) 28. A computer program product according to claim 17, wherein said instructions are further executable to combine like attributes for the extracted relational facts produced in performing said extracting relational facts from the free text.

Claim 29 (original) 29. A computer program product according to claim 17, wherein said instructions are further executable to combine like relation types for the extracted relational facts produced in performing said extracting relational facts from the free text.

Claim 30 (original) 30. A computer program product according to claim 17 wherein said instructions provide relational facts with domain roles applied in performing said extracting relational facts from the free text.

Claim 31 (original) 31. A computer program product according to claim 17, wherein said

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instructions store the relational facts produced in performing said extracting relational facts from the free text.

Claim 32 (original) 32. A computer program product according to claim 17, wherein the extracted relational facts produced in performing said extracting relational facts and the integrated data produced by the performance of said integrating the produced data includes reference information to the original free text.

33. A method for integrating mixed format data, comprising the steps of: accessing a database of structured data, the structured data comprising a set of data tuples;
accessing a source of unstructured data, the unstructured data including free text relatable to the data tuples of the structured data;
accessing a source of data records, at least some of the data records containing both structured data and unstructured data, the unstructured data including free text relatable to the data tuples of the structured data to the structured data of the data record from which the free text came;
~~extracting relationships from the free text;~~
using linguistic characteristics of the free text to extract relational facts from it,
producing a set of construed data reflecting at least one relational fact conveyed in the free text, each construed datum containing at least one relational fact, each construed datum being further relatable to ~~a data tuple of the structured data~~ of the data record from which the free text came; and
integrating the produced data with the ~~data tuples of the structured data,~~
and
rendering at least one visual representation of the integrated data.

Claim 34 (cancelled)

Claim 35 (cancelled)

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Claim 36 (original) 36. A method according to claim 33, wherein said performing said interpreting the free text applies caseframes.

Claim 37 (original) 37. A method according to claim 33, further comprising the step of producing a new database containing the integrated data produced by said integrating.

Claim 38 (original) 38. A method according to claim 33, further comprising the step of inserting the produced data into the database of structured data.

Claim 39 (original) 39. A method according to claim 33, further comprising the step of creating a new database.

Claim 40 (original) 40. A method according to claim 39, wherein the new database is a relational database.

Claim 41 (original) 41. A method according to claim 40, wherein new database includes at least one file containing the integrated data produced by said integrating.

Claim 43 (original) 42. A method according to claim 41, wherein the new database has a format selected from the group of XML, character separated values, spreadsheet formats and file-based database structures.

Claim 43 (original) 43. A method according to claim 33, further comprising the step of combining like attributes for the extracted relational facts produced in performing said extracting relational facts from the free text.

Claim 44 (original) 44. A method according to claim 33, further comprising the step of combining like relation types for the extracted relational facts produced in performing said

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extracting relational facts from the free text.

Claim 45 (original) 45. A method according to claim 33, wherein domain roles are applied in said step of extracting relational facts from the free text.

Claim 46 (original) 46. A method according to claim 33, further comprising the step of storing the relational facts produced in performing said extracting relational facts from the free text.

Claim 47 (original) 47. A method according to claim 33, wherein the extracted relational facts produced in performing said extracting relational facts and the integrated data produced by the performance of said integrating the produced data includes reference information to the original free text.